

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

PERIODIC REPORTING
(PROPOSAL SIX)

Docket No. RM2020-13

PETITION OF THE UNITED STATES POSTAL SERVICE FOR THE
INITIATION OF A PROCEEDING TO CONSIDER PROPOSED CHANGES
IN ANALYTICAL PRINCIPLES (PROPOSAL SIX)
(September 15, 2020)

Pursuant to 39 C.F.R. § 3050.11, the Postal Service requests that the Commission initiate a rulemaking proceeding to consider a proposal to change analytical principles relating to the Postal Service's periodic reports. The proposal, relating to the establishment of a new methodology to determine the volume variability factors (variabilities) for the mail processing cost pools representing automated letter and flat sorting operations, is labeled Proposal Six and is discussed in detail in the attached text.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Nabeel R. Cheema
Chief Counsel, Pricing & Product Support

Eric P. Koetting

475 L'Enfant Plaza, S.W.
Washington, D.C. 20260-1137
(202) 277-6333
eric.p.koetting@usps.gov
September 15, 2020

Proposal Six

New Variability Methodology for Automated Flat and Letter Sorting Cost Pools

Objective

The purpose of this proposal is to establish a new methodology for the volume variability factors (variabilities) for the mail processing cost pools representing automated letter and flat sorting operations: DBCS, AFSM100, and FSS.¹ Accrued labor costs in these three cost pools totaled \$2.3 billion in FY2019. The proposed methodology is based on econometric analysis of workhour and workload data collected by the Postal Service on an ongoing basis. It would replace the established methodology in which In-Office Cost System (IOCS) tallies are used to partition the cost pools into activities assumed to be 100 percent volume variable—which constitute the vast majority of costs in the cost pools under study—and other activities assumed to be non-volume-variable.² Because the underlying data are produced in the course of Postal Service operations and are already used in the Annual Compliance Report (ACR) for other purposes, including development of accrued costs for mail processing

¹ The Delivery Barcode Sorter (DBCS) processes letter- and card-shape mail. The Automated Flats Sorting Machine 100 (AFSM100) and Flats Sequencing Sorter (FSS) primarily process flat-shaped mail.

² IOCS is an ongoing sampling-based system providing data on work activities performed by clerks, mail handlers, city delivery carriers, and supervisory and technical personnel.

cost pools and measuring labor productivities, the proposed methodology would permit regular re-estimation and updating of the variabilities.

Background

The cost pools included in this proposal encompass labor expenses associated with automated distribution of letters (DBCS) and flats (AFSM100 and FSS). The main factor determining labor requirements for sorting operations is the number of piece handlings performed to distribute pieces to their destinations, called Total Pieces Fed (TPF) in the Management Operating Data System (MODS). The number of handlings, in turn, depends primarily on the number of mailpieces requiring distribution, as well as the presort and destination profiles of the mail. In automated distribution operations, the actual number of handlings are directly counted by the sorting equipment and automatically transmitted from the equipment to the webEOR system, along with other operating statistics such as runtime (machine utilization) data. The MODS system collects and aggregates piece handlings and runtime data through automated interfaces with webEOR. Labor usage or workhour data by operation are collected via TACS from timeclock rings and are collected in MODS.

The current mail processing variability methodology has been in place since Docket No. R71-1, and its origins predate the Postal Reorganization Act (PRA), as well as the development of the automated mail processing technologies that are the subject of this proposal. As noted above, most mail processing activities are assumed to be 100 percent volume variable, though the cost for certain limited activities measured via

IOCS are treated as non-volume-variable. Table 1 shows recent history of the volume-variable cost fractions for the DBCS, AFSM100, and FSS cost pools under current methodology. The non-volume-variable activities are generally less than two percent of costs in the cost pools, and the implied variabilities are accordingly close to 100 percent.

Table 1. DBCS, AFSM100, and FSS Variabilities, Current Methodology, FY2013-19

Fiscal Year	DBCS	AFSM 100	FSS
2013	0.994	0.986	0.978
2014	0.994	0.990	0.990
2015	0.993	0.985	0.985
2016	0.992	0.984	0.980
2017	0.993	0.982	0.978
2018	0.994	0.986	0.983
2019	0.994	0.985	0.982

Mail processing variabilities for cost pools including (but not limited to) predecessors of the current DBCS and AFSM100 cost pools were extensively litigated in the Docket No. R97-1, R2000-1, and R2006-1 rate cases, in which several competing econometric models were advanced by the Postal Service and intervenors. The Postal Rate Commission declined to adopt any empirical model(s) for mail processing variability, citing data and econometric issues.

Several factors merit re-examination of variabilities for automated letter and flat sorting. The PRA rate case studies were conducted using data through FY2005, a period in which volumes of letters and flats were generally growing and earlier generations of automated sorting equipment were being replaced by the types comprising the current fleet. Letter and flat automation technology is comparably mature and has been relatively stable since the deployment of FSS was completed in FY2011. Volumes of letters and flats peaked around the time of the enactment of the Postal Accountability and Enhancement Act in late 2006 and has fallen sharply and steadily beginning with the effects of the Great Recession and continuing to the present. As the Postal Service has recently shown, volume declines were associated with differential effects on the scale of letter and flat operations, with the latter exhibiting larger reductions in scale and more pronounced productivity declines.³ The reliability of automated counts of mailpiece handlings addresses key econometric concerns, while the availability of machine utilization data allows key technology assumptions underlying the 100 percent variability approach to be tested directly.

Proposal

The proposal is summarized below, and the underlying research is described in detail in the report by Drs. A. Thomas Bozzo and Timothy Huegerich, electronically attached to

³ See Response of the United States Postal Service to Commission Request for Status Reports in the FY 2019 ACD, Item 2 (July 15, 2020).

the petition as a separate PDF file. Source data for the analysis, Stata estimation code, output logs, and estimated cost impacts are provided in USPS-RM2020-13-1.

The proposed variabilities employ monthly MODS datasets, with data by facility and operation, used to measure labor productivities for use in the ACR, compiled into a multi-year panel dataset. The variabilities are derived from a regression of the natural logarithm (log) of workhours on log current and lagged TPF and seasonal (monthly) dummy variables:

$$\ln Workhours_{it} = a_i + b_1 \ln TPF_{it} + b_2 \ln TPF_{i,t-1} + b_3 \ln TPF_{i,t-12} + c \cdot D_{m(t)} + e_{it}$$

The index i indicates facilities and t represents time periods (months). The estimated variability is the sum of the coefficients on current and lagged TPF, $b_1 + b_2 + b_3$.

Including lagged TPF terms allows for longer-term adjustments of hours to workloads, consistent with the common use of same period last year (SPLY) and prior period data in operational data reporting for field management purposes. Monthly dummy variables control for seasonality in workhours that may not be fully reflected in TPF, such as higher staffing for service reasons in seasonal peak periods. Finally, the regression intercepts are allowed to vary by facility to avoid statistical bias or inconsistency due to facility-specific factors affecting workhours. Sample periods comprising the most recent four fiscal years provide for input data reflecting the current state of operations, while presenting adequate sample sizes for the regression models. The regression sample periods would be rolled forward and the models re-estimated annually, such that the variabilities applied in a given fiscal year would be estimated using the most recent four fiscal years' data.

The FY2019 variabilities using the proposed methods are shown in Table 2, below, based on a FY2016-FY2019 sample period. The variabilities would apply to the mail processing portion of the cost pools' accrued costs—i.e., the total accrued costs of the pools less costs “migrated” to other components within Cost Segment 3.

Table 2. DBCS, AFSM100, and FSS Variabilities, Proposed Methodology

	DBCS	AFSM 100	FSS
Variability	0.976	0.774	0.804

Impact

The proposed variabilities would reduce FY2019 volume-variable labor costs for the three cost pools by 8.3 percent overall, though the effect on DBCS (letter) operations is much smaller (1.8 percent) than the effect on flats operations (20.8 percent), as the estimated DBCS variability is relatively close to the result of the current methodology. Including piggybacks, the proposal reduces measured volume-variable and product specific costs in the Cost and Revenue Analysis C Report by 0.79 percent.

The effects of the proposed variabilities on unit costs is shown in Table 3. Relatively larger product cost impacts are observed for flat-shape products, which incur larger shares of costs in automated flat distribution operations. Cost impacts on letter and parcel-shape products are relatively small. A table showing the impacts of the proposal

on individual competitive products is provided under seal in USPS-RM2020-13-NP1
(along with other commercially-sensitive documentation material).

Table 3. Impact of Proposal Six on Product Unit Attributable Costs

	Unit Attributable Cost Before Final Adjustments (dollars/piece)			
	FY19 ACR	Proposed	Difference	% Change
MARKET DOMINANT PRODUCTS				
First-Class Mail				
Single Piece Letters	0.3305	0.3296	-0.0009	-0.28%
Single Piece Cards	0.3314	0.3306	-0.0007	-0.23%
Total Single Piece Letters and Cards	0.3316	0.3307	-0.0009	-0.28%
Presort Letters	0.1329	0.1325	-0.0004	-0.32%
Presort Cards	0.0901	0.0899	-0.0002	-0.23%
Total Presort Letters and Cards	0.1309	0.1304	-0.0004	-0.31%
Flats	1.1703	1.1235	-0.0469	-4.00%
Total First-Class	0.2200	0.2185	-0.0015	-0.68%
USPS Marketing Mail				
High Density and Saturation Letters	0.0839	0.0837	-0.0003	-0.31%
High Density and Saturation Flats and Parcels	0.1271	0.1261	-0.0011	-0.83%
Every Door Direct Mail Retail	0.0711	0.0711	0.0000	-0.01%
Carrier Route	0.2631	0.2586	-0.0045	-1.72%
Letters	0.1115	0.1109	-0.0006	-0.50%
Flats	0.6041	0.5841	-0.0200	-3.31%
Parcels	2.3035	2.2959	-0.0076	-0.33%
Total USPS Marketing Mail	0.1559	0.1543	-0.0016	-1.02%
Periodicals				
In County	0.1928	0.1913	-0.0015	-0.80%
Outside County	0.4277	0.4159	-0.0118	-2.75%
Total Periodicals	0.4025	0.3919	-0.0106	-2.64%
Package Services				
Alaska Bypass	15.9849	15.9849	0.0000	0.00%
Bound Printed Matter Flats	0.5223	0.5084	-0.0139	-2.67%
Bound Printed Matter Parcels	1.0376	1.0355	-0.0021	-0.20%
Media and Library Mail	4.9555	4.9495	-0.0060	-0.12%
Total Package Services	1.3636	1.3562	-0.0074	-0.54%
U.S. Postal Service	1.0737	1.0682	-0.0055	-0.51%
Free Mail	1.1682	1.1645	-0.0037	-0.31%

Table 3. Impact of Proposal Six on Product Unit Attributable Costs (continued)

	Unit Attributable Cost Before Final Adjustments (dollars/piece)			
	FY19 ACR	Proposed	Difference	% Change
MARKET DOMINANT PRODUCTS (cont'd)				
Special Services				
Ancillary Services				
Certified	2.5591	2.5593	0.0002	0.01%
COD	6.8341	6.8344	0.0003	0.00%
Insurance	2.8897	2.8898	0.0001	0.00%
Registered Mail	11.5883	11.5691	-0.0192	-0.17%
Stamped Envelopes	n/a	n/a	n/a	n/a
Stamped Cards	n/a	n/a	n/a	n/a
Other Ancillary Services	177.9912	177.9629	-0.0283	-0.02%
Address Management Services	n/a	n/a	n/a	n/a
Caller Service	n/a	n/a	n/a	n/a
Money Orders	1.9013	1.9015	0.0002	0.01%
Post Office Box Service	112.5670	112.7003	0.1333	0.12%
Total Domestic Market Dominant Services	5.6027	5.6053	0.0026	0.05%
Total Domestic Competitive Attributable Costs	2.6063	2.6061	-0.0002	-0.01%
INTERNATIONAL	2.2913	2.2888	-0.0025	-0.11%